

## JOINT MANAGEMENT PLAN REVIEW



### DRAFT ACTION PLAN: ECOSYSTEM PROTECTION – INCORPORATING FISHING ISSUES INTO RESEARCH AND EDUCATION PLANS

REVISED: FEBRUARY 20, 2003

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***Please Note:** The MBNMS and the Sanctuary Advisory Council have tasked the management plan working groups with development of draft action plans that characterize the issue or problem and identify strategies and activities that address the issue. The working groups will develop these strategies and activities as they meet over the next several months. With this goal in mind, the progress of the group, the decisions, areas of agreement will be outlined in a progressively developed action plan identifying draft goals, issue characterizations, and strategies and activities. Members of the group as well as other interested parties should look to this draft action plan as it develops as a way of tracking the group's progress and decisions.*

#### GOAL

To develop a program that would educate the public about fishing issues in the Sanctuary and to involve fishermen in research activities to add to the body of research available for fishery-related decision making processes.

#### BACKGROUND

##### ***Fishing Activities in the MBNMS***

The commercial and recreational fishing industry constitutes a key component to the economic, historical, and cultural fabric of the region. Most fishes caught within the Sanctuary are landed at one of five main ports: Princeton/Half Moon Bay, Santa Cruz, Moss Landing, Monterey Bay, or Morro Bay. More than 1,200 commercial vessels fish in the region annually, along with substantial recreational fishing (Starr et al. 2002). More than 200 species of invertebrates and fishes were caught in the commercial and recreational fisheries in this region from 1981-2000, with more than 70% of the commercial fish landings composed of market squid, Pacific sardine, rockfishes, Dover sole, northern anchovy, Chinook salmon, mackerel, albacore, and sablefish. The five primary gear types used are pots or traps, trawl nets, hook-and-line gear, purse seines, and gill or set nets. In 1997, marine fisheries for the counties of Marin, San Mateo, Santa Cruz, Monterey, San Luis Obispo, and San Francisco were valued at a total of \$53 million, led by San Francisco County at more than \$19 million and Monterey County at more than \$14 million.

##### ***MBNMS Fisheries Related Programs***

Current involvement of the Sanctuary in issues related to fishing includes conducting fisheries-related research, sponsoring educational events, and occasionally commenting to other agencies on fishery and ecosystem management issues.

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### *Fishery Education*

In 1998, the Packard Foundation sponsored the California Sea Grant publication “Fishery Resources of the Monterey Bay National Marine Sanctuary” by Starr, Johnson, Laman, and Cailliet.<sup>1</sup> That original publication provided a summary of existing commercial and recreational fisheries, management strategies, management issues, and status of selected fisheries according to landings at the five major ports within the Sanctuary from 1980-1995.

In 2001, the Sanctuary commissioned an update of the 1998 report by Starr, Cope, and Kerr.<sup>2</sup> This new report goes beyond just providing an update of landings data through the year 2000. The different fisheries are presented using a habitat approach rather than on a species-by-species basis. Technical concepts and information that fishery scientists use to estimate the population sizes of harvested species are summarized for a general audience. A brief description of the types of fisheries operating in the region encompassed by the Sanctuary, and a summary of fishery management operations from 1981-2000 are provided. The report also provides suggestions as to why fishery landings changed over time, including changes in regulations (including gear restrictions and quotas), declines in populations, and El Niño events.

### *Watershed Protection*

The Sanctuary has an active role in the protection of the salmon and steelhead populations of the region through preservation of the watershed habitat and water quality that sustain these species during their migration and spawning activities. This includes watershed management and outreach activities with the agricultural community, cities and counties, education of the public about salmonid life cycles and habitat threats, and citizen monitoring of water quality in streams and rivers.

### *Collaborative Efforts with the Fishing Community*

Beginning in 2001, the MBNMS began working collaboratively with a subcommittee of the Alliance of Communities for Sustainable Fisheries to evaluate the potential benefits and drawbacks of using marine reserves to facilitate ecosystem conservation and sustainable fisheries. This subcommittee, which includes fishermen, scientists, and environmental organizations, is attempting to develop solutions, which can protect Sanctuary resources while sustaining the region’s critical fishing industry. The subcommittee is attempting to provide recommendations on the issue to the California Department of Fish and Game, the Pacific Fisheries Management Council, and the Sanctuary program.

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<sup>1</sup> Starr, R.M., K.A. Johnson, N. Laman, and G.M. Cailliet. 1998. Fishery resources of the Monterey Bay National Marine Sanctuary. California Sea Grant College System Publication No. T-042, 102 p.

<sup>2</sup> Starr, R.M., J.M. Cope, and L.A. Kerr. 2002. Trends in Fisheries and Fishery Resources Associated with the Monterey Bay National Marine Sanctuary from 1981-2000. California Sea Grant College System Publication No. T-046, 156 p.



### ***MBNMS Research Program***

The primary mission of the MBNMS research program is to provide scientific information for resource protection and management. Several basic approaches to achieve this mission include 1) determining information gaps, 2) developing and participating in collaborations to study issues, and 3) interpreting research for decision makers.

### ***MBNMS Education Program***

The mission of the education program is to promote awareness, understanding, appreciation, and stewardship of the Monterey Bay National Marine Sanctuary through public education and conservation programs.

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## CONDENSED LIST OF STRATEGIES OF THE FISHING ISSUES ACTION PLAN

**Note: Dissemination is an education role, but included in research strategies to indicate the need for a close link between education and research efforts.**

### *Research Plan Strategies*

- 1) Facilitate information collection and dissemination on fisheries relevant data in the MBNMS (e.g., stock trends, environmental data, habitat distribution)
- 2) Facilitate communication among interested parties/user groups (e.g., fishermen, scientists, agencies, education groups, NGOs)
- 3) Facilitate the involvement of the fishing community in information collection and dissemination on fisheries relevant data in the MBNMS (e.g., stock trends, environmental data, habitat distribution, using local knowledge to design projects)
- 4) Facilitate getting fishermen involved in the management decision processes
- 5) Facilitate the collection and dissemination of socio-economic, cultural, and historical information on fishing communities (e.g., maritime history, prehistory)
- 6) Facilitate defining, developing, and promoting sustainable fisheries

### *Education Plan Strategies*

- 7) Provide Sanctuary related fishery information to fishermen and the general public
- 8) Involve fishermen and other interested parties in developing education programs and products
- 9) Educate general public on healthy and sustainable fisheries.
- 10) Educate the public on the role of the Sanctuary and agencies related to fisheries mandates, processes, approaches, and regulations (includes different management approaches; other programs- NGOs; how they implement mandates)
- 11) Facilitate the collection and dissemination of socio-economic, cultural, and historical information on fishing communities (e.g., maritime history, prehistory)
- 12) Educate the public on links between healthy ecosystems and fish stocks (e.g., impacts of pollution, healthy watersheds)
- 13) Educate the public on the data limited status of fisheries resource management.
- 14) Educate the public on the conservation efforts of fishermen
- 15) Issue around appropriate use of research data (Roxanne Jordan will suggest wording, for discussion at next meeting)

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## RESEARCH PLAN (STRATEGIES 1-6)

### STRATEGY MB-FI 1 - FACILITATE INFORMATION COLLECTION AND DISSEMINATION ON FISHERIES RELEVANT DATA IN THE MBNMS (E.G., STOCK TRENDS, ENVIRONMENTAL DATA, HABITAT DISTRIBUTION)

- a) Anthropogenic
- b) Biodiversity of fish
- c) Climatic/Oceanographic
- d) Abundance vs. landings
- e) How can fishermen access researchers

#### *Activity A for Collection of Fisheries Relevant data*

The MBNMS will sponsor an recurring workshop series with all interested parties to determine existing management capabilities/needs, efforts, gaps, overlap, and develop a coordinated plan for collection of fisheries relevant data (includes interests beyond management or improved management)

*Project status:*

*Potential partners:*

*Estimated costs:*

#### *Activity B for Collection of Fisheries Relevant data*

Include fisheries relevant data in SIMoN metadata files and web site; ongoing

*Project status:*

*Potential partners:*

*Estimated costs:*

#### *Activity C for Collection of Fisheries Relevant data*

The Sanctuary will develop and facilitate mechanisms to implement the results from the above workshop (perhaps through subgroups of the workshop)

*Project status:*

*Potential partners:*

*Estimated costs:*

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**STRATEGY MB-FI 2 - FACILITATE COMMUNICATION AMONG INTERESTED PARTIES/USER GROUPS (E.G., FISHERMEN, SCIENTISTS, AGENCIES, EDUCATION GROUPS, NGOS)**

**Activity A:**

*Project status:*

*Potential partners:*

*Estimated costs:*

**Activity B:**

*Project status:*

*Potential partners:*

*Estimated costs:*

**Activity C:**

*Project status:*

*Potential partners:*

*Estimated costs:*

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**STRATEGY MB-FI 3 - FACILITATE THE INVOLVEMENT OF THE FISHING COMMUNITY IN INFORMATION COLLECTION AND DISSEMINATION ON FISHERIES RELEVANT DATA IN THE MBNMS (E.G., STOCK TRENDS, ENVIRONMENTAL DATA, HABITAT DISTRIBUTION, USING LOCAL KNOWLEDGE TO DESIGN PROJECTS)**

**Activity A:**

*Project status:*

*Potential partners:*

*Estimated costs:*

**Activity B:**

*Project status:*

*Potential partners:*

*Estimated costs:*

**Activity C:**

*Project status:*

*Potential partners:*

*Estimated costs:*

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**STRATEGY MB-FI 4 - FACILITATE GETTING FISHERMEN INVOLVED IN THE  
MANAGEMENT DECISION PROCESSES**

***Activity A:***

*Project status:*

*Potential partners:*

*Estimated costs:*

***Activity B:***

*Project status:*

*Potential partners:*

*Estimated costs:*

***Activity C:***

*Project status:*

*Potential partners:*

*Estimated costs:*

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**STRATEGY MB-FI 5 - FACILITATE THE COLLECTION AND DISSEMINATION OF SOCIO-ECONOMIC, CULTURAL, AND HISTORICAL INFORMATION ON FISHING COMMUNITIES (E.G., MARITIME HISTORY, PREHISTORY)**

**Activity A:**

*Project status:*

*Potential partners:*

*Estimated costs:*

**Activity B:**

*Project status:*

*Potential partners:*

*Estimated costs:*

**Activity C:**

*Project status:*

*Potential partners:*

*Estimated costs:*

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**STRATEGY MB-FI 6 - FACILITATE DEFINING, DEVELOPING, AND PROMOTING SUSTAINABLE FISHERIES**

- Identify agencies conducting research on market processes
- Facilitate research on sustainable fisheries, and limiting fishing impacts
- “Markets”
- Pros and cons of aquaculture

**Activity A:**

*Project status:*

*Potential partners:*

*Estimated costs:*

**Activity B:**

*Project status:*

*Potential partners:*

*Estimated costs:*

**Activity C:**

*Project status:*

*Potential partners:*

*Estimated costs:*

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**EDUCATION PLAN (STRATEGIES 7-15)**

**STRATEGY MB-FI 7 - PROVIDE SANCTUARY RELATED FISHERY INFORMATION TO FISHERMEN AND THE GENERAL PUBLIC**

- Recreation fishermen, commercial fishermen, Alliance
- Educate public on natural variability in fish stocks (e.g., cycles, climate)
- How to increase attendance at Sanctuary Currents and other activities

**Activity A:**

*Project status:*

*Potential partners:*

*Estimated costs:*

**Activity B:**

*Project status:*

*Potential partners:*

*Estimated costs:*

**Activity C:**

*Project status:*

*Potential partners:*

*Estimated costs:*

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**STRATEGY MB-FI 8 - INVOLVE FISHERMEN AND OTHER INTERESTED PARTIES IN DEVELOPING EDUCATION PROGRAMS AND PRODUCTS**

- The Alliance, individual fishermen, NGOs

**Activity A:**

*Project status:*

*Potential partners:*

*Estimated costs:*

**Activity B:**

*Project status:*

*Potential partners:*

*Estimated costs:*

**Activity C:**

*Project status:*

*Potential partners:*

*Estimated costs:*

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**STRATEGY MB-FI 9 - EDUCATE GENERAL PUBLIC ON HEALTHY AND SUSTAINABLE FISHERIES.**

- Define sustainable
- Pros and cons of aquaculture
- Educate consumers, markets and suppliers
- Fishing techniques

**Activity A:**

*Project status:*

*Potential partners:*

*Estimated costs:*

**Activity B:**

*Project status:*

*Potential partners:*

*Estimated costs:*

**Activity C:**

*Project status:*

*Potential partners:*

*Estimated costs:*

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**STRATEGY MB-FI 10 - EDUCATE THE PUBLIC ON THE ROLE OF THE SANCTUARY AND AGENCIES RELATED TO FISHERIES MANDATES, PROCESSES, APPROACHES, AND REGULATIONS (INCLUDES DIFFERENT MANAGEMENT APPROACHES; OTHER PROGRAMS- NGOS; HOW THEY IMPLEMENT MANDATES)**

- Different agencies have different responsibilities; sometimes they overlap; interfaces; different protections provided; Sanctuary ecosystem approach
- Role of the Sanctuary is to promote multiple uses of the Sanctuary resources, including fishery resources

**Activity A:**

*Project status:*

*Potential partners:*

*Estimated costs:*

**Activity B:**

*Project status:*

*Potential partners:*

*Estimated costs:*

**Activity C:**

*Project status:*

*Potential partners:*

*Estimated costs:*

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**STRATEGY MB-FI 11 - FACILITATE THE COLLECTION AND DISSEMINATION OF SOCIO-ECONOMIC, CULTURAL, AND HISTORICAL INFORMATION ON FISHING COMMUNITIES (E.G., MARITIME HISTORY, PREHISTORY)**

- Education on history of fisheries (includes culture and heritage)

**Activity A:**

*Project status:*

*Potential partners:*

*Estimated costs:*

**Activity B:**

*Project status:*

*Potential partners:*

*Estimated costs:*

**Activity C:**

*Project status:*

*Potential partners:*

*Estimated costs:*

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**STRATEGY MB-FI 12 - EDUCATE THE PUBLIC ON LINKS BETWEEN HEALTHY ECOSYSTEMS AND FISH STOCKS (E.G., IMPACTS OF POLLUTION, HEALTHY WATERSHEDS)**

**Activity A:**

*Project status:*

*Potential partners:*

*Estimated costs:*

**Activity B:**

*Project status:*

*Potential partners:*

*Estimated costs:*

**Activity C:**

*Project status:*

*Potential partners:*

*Estimated costs:*

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**STRATEGY MB-FI 13 - EDUCATE THE PUBLIC ON THE DATA LIMITED STATUS OF FISHERIES RESOURCE MANAGEMENT**

- Educate the public, funding groups, and user groups
- What information is actually available vs. needed to effectively manage fisheries
- Observer data, tagging, monitoring, research that decision makers need
- What are the causes of the discrepancy
- How can the public contribute to solving the problem
- Programs to train fishermen to collect data for fishery management

**Activity A:**

*Project status:*

*Potential partners:*

*Estimated costs:*

**Activity B:**

*Project status:*

*Potential partners:*

*Estimated costs:*

**Activity C:**

*Project status:*

*Potential partners:*

*Estimated costs:*

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**STRATEGY MB-FI 14 - EDUCATE THE PUBLIC ON THE CONSERVATION EFFORTS OF FISHERMEN**

- Self regulation
- Fleets make conservation-based decisions that are self-imposed
- Fishermen developed ideas that became regulations
- Oil spill response

**Activity A:**

*Project status:*

*Potential partners:*

*Estimated costs:*

**Activity B:**

*Project status:*

*Potential partners:*

*Estimated costs:*

**Activity C:**

*Project status:*

*Potential partners:*

*Estimated costs:*

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**STRATEGY MB-FI 15 - ISSUE AROUND APPROPRIATE USE OF RESEARCH DATA**  
(Roxanne Jordan will suggest wording, for discussion at next meeting)

**Activity A:**

*Project status:*

*Potential partners:*

*Estimated costs:*

**Activity B:**

*Project status:*

*Potential partners:*

*Estimated costs:*

**Activity C:**

*Project status:*

*Potential partners:*

*Estimated costs:*

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